



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

RBE1X53-166-817-5
Job Sheet 189500



Part No: RBE1X53-166-817-5

Job Qty: 4 pcs

Part Name: Ring 2



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 1/25/19

Job Tracking No:

Due Date: 2/28/19

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG RBE1X53-166-817 Rev.2 IPP Rev. A 19.01.07 New issue DP Verify DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	Waterjet - Omax - 1	4 pcs	2/28/19	2/28/19	0.00	1.00	Waterjet - Omax		pc 19/02/05
120	NV5000 - 1 - B4B	4 pcs	2/28/19	2/28/19	0.00	8.00	NV5000 - 1 - B4B		
							NV5000 - 2 - B4B		
130	QC 2	4 pcs	2/28/19	2/28/19	0.00	0.00	QC 2 - 1		
							QC 2 - 12		
							QC 2 - 14		
							QC 2 - 17		
							QC 2 - 19		
							QC 2 - 2		
							QC 2 - 20		
							QC 2 - 22		
							QC 2 - 23		
							QC 2 - 25		
							QC 2 - 32		
							QC 2 - 33		
							QC 2 - 35		
							QC 2 - 38		
							QC 2 - 39		
							QC 2 - 4		
							QC 2 - 40		
							QC 2 - 44		
							QC 2 - 45		
							QC 2 - 48		
							QC 2 - 49		
							QC 2 - 50		
							QC 2 - 51		
							QC 2 - 52		
							QC 2 - 54		
							QC 2 - 56		
							QC 2 - 57		
							QC 2 - 62		

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140 QC 8	4 pcs	2/28/19	0.00 0.00	QC 2 - 63	
				QC 2 - 8	
				QC 8 - 12	
				QC 8 - 14	
				QC 8 - 17	
				QC 8 - 20	
				QC 8 - 25	
				QC 8 - 3	
				QC 8 - 32	
				QC 8 - 33	
				QC 8 - 35	
				QC 8 - 38	
				QC 8 - 39	
				QC 8 - 4	
				QC 8 - 44	
				QC 8 - 45	
				QC 8 - 49	
				QC 8 - 58	
				QC 8 - 8	B.A 19-03-21
				QC 8 - 9	
				QC 8 - 68	
				QC 8 - 67	
				QC 8 - 1 (A)	
160 Outsource - 1 Heat Treat	4 pcs	2/28/19		ATL002-VC	5 003/25/2019 PL
180 Packaging 2-1 - Receive - B4B	4 pcs	2/28/19	0.00 0.00	Packaging 2 - 1 - B4B	
				Packaging 2 - 2 - B4B	
				Packaging 2 - 3 - B4B	
				Packaging 2 - 5 - B4B	
				Packaging 2 - 4 - B4B	
				Packaging 2 - 6 - B4B	
				Packaging 2 - 7 - B4B	
				Packaging 2 - 8 - B4B	
				Packaging 2 - 9 - B4B	
				Packaging 2 - 10 - B4B	
				Packaging 2 - 11 - B4B	
				Packaging 2 - 12 - B4B	
				Packaging 2 - 13 - B4B	
				Packaging 2 - 14 - B4B	
				Packaging 2 - 15 - B4B	
				Packaging 2 - 16 - B4B	
				Packaging 2 - 17 - B4B	
				Packaging 2 - 18 - B4B	
				Packaging 2 - 19 - B4B	
				Packaging 2 - 20 - B4B	
				Packaging 2 - 21 - B4B	
				Packaging 2 - 22 - B4B	
				Packaging 2 - 23 - B4B	
				Packaging 2 - 24 - B4B	
				Packaging 2 - 25 - B4B	
				Packaging 2 - 26 - B4B	
				Packaging 2 - 27 - B4B	
				Packaging 2 - 28 - B4B	
				Packaging 2 - 29 - B4B	
				Packaging 2 - 30 - B4B	
				Packaging 2 - 31 - B4B	
				Packaging 2 - 32 - B4B	
				Packaging 2 - 33 - B4B	
				Packaging 2 - 34 - B4B	
				Packaging 2 - 35 - B4B	

Black
oxide
tech

190 QC 6	4 pcs	2/28/19	0.00 0.00	Packaging 2 - 36 - B4B	
				QC 6 - 38	
				QC 6 - 42	
				QC 6 - 9	DAS
				QC 6 - 68	APR 02 2019 68
				QC 6 - 61	9-89
200 Packaging 3-1 - Stock - B4B	4 pcs	2/28/19	0.00 0.00	Packaging 3 - 1 - B4B	
				Packaging 3 - 2 - B4B	
				Packaging 3 - 3 - B4B	
				Packaging 3 - 4 - B4B	
				Packaging 3 - 5 - B4B	
				Packaging 3 - 6 - B4B	
				Packaging 3 - 7 - B4B	
				Packaging 3 - 8 - B4B	
				Packaging 3 - 9 - B4B	
				Packaging 3 - 10 - B4B	
				Packaging 3 - 11 - B4B	
				Packaging 3 - 12 - B4B	
				Packaging 3 - 13 - B4B	
				Packaging 3 - 14 - B4B	
				Packaging 3 - 15 - B4B	
				Packaging 3 - 16 - B4B	
				Packaging 3 - 17 - B4B	
				Packaging 3 - 18 - B4B	
				Packaging 3 - 19 - B4B	
				Packaging 3 - 20 - B4B	
				Packaging 3 - 21 - B4B	
				Packaging 3 - 22 - B4B	
				Packaging 3 - 23 - B4B	
				Packaging 3 - 24 - B4B	
				Packaging 3 - 25 - B4B	
				Packaging 3 - 26 - B4B	
				Packaging 3 - 27 - B4B	
				Packaging 3 - 28 - B4B	
				Packaging 3 - 29 - B4B	
				Packaging 3 - 30 - B4B	
				Packaging 3 - 31 - B4B	
				Packaging 3 - 32 - B4B	
				Packaging 3 - 33 - B4B	
				Packaging 3 - 34 - B4B	
				Packaging 3 - 35 - B4B	
				Packaging 3 - 36 - B4B	
210 QC 21 - SA	4 pcs	2/28/19	0.00 0.00	QC 21 - SA - 21	DAS
				QC 21 - SA - 70	21 APR 03 2019 9-89

Part Op 100 - 1-Cut blank 2-Deburr if necessary
 Descriptions: 120 - 1-Machine as per folio FC _____ FOLIO REV: AA DWG REV: 2 2-Deburr 3-
 Engrave # only using marktronic
 130 - QC2- Inspect parts off machine FAI/FAIB
 140 - QC8- Inspect parts - second check
 160 - Outsource process - Heat Treat - 1--Issue P/O to ATLANTIC HEAT TREAT ; P/O _____ RC 28-34 2-Bead
 blast 3-Black oxide finish, MIL-C-13924C Class 1 -Apply thin layer of oil/CPC per MIL-PRF-16173 Grade 3 Class 1 or
 MIL-c-81309 Type III Or MILL-C23411A or MIL-PRF-81309 and wipe off excess. -Certificate of Conformity is required
 180 - Receive & Inspect for Damage & Mat'l Certs
 190 - QC6- All purchased or subcontracted products
 200 - Identify as per dwg & Stock Location: _____
 210 - QC21- Final Inspection - Work Order Release

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
MT-4140-S-1.750X10.000	AISI 4140 Steel Sheet/Plate	1.0640 ft (.266 ea)	100-Waterjet - Omax - 1	

Job Allocations				
Operation	Component Part	Required	Inventory	Allocated
100-Waterjet - Omax - 1	MT-4140-S-1.750X10.000	1	6	0
Part Specifications				
Specifications could not be found.				

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DART AEROSPACE LTD		Work Order:	18 9500
Description: Ring 2		Part Number:	RBE1 x 53-166-817-5
Inspection Dwg:	Rev: 2	Page 1 of 1	

INSPECTION SHEET

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
2.817	H/-0.05	2.815	✓		CWC-20	
.513	H/-0.05	.512	✓		CWC-20	
1.025	H/-0.05	1.027	✓		CWC-20	
.680	H/-0.05	.680	✓		CWC-20	
9.450	H/-0.05	water jet		cut feed	taper	
.08 x 45°	H/-0.010	.08	✓		CWC-20	
.361	H/-0.005	.363	✓		pin	
.428	H/-0.05	.425	✓		CWC-20	
.197	H/-0.05	.198	✓		CWC-20	
.630	H/-0.05	.629	✓		CWC-20	
.394	H/-0.05	.393	✓		CWC-20	
1.575	H/-0.05	1.575	✓		CWC-20	
.393	H/-0.05	.389	✓		CWC-20	
.91	H/-0.010	.905/.915	✓		CWC-20	
R.188	H/-0.010	.188	✓		red tool	
R.1977	H/-0.05	1.9785	✓		CWC-20	
R.2.661	H/-0.05	2.6625	✓		CWC-20	
.060	H/-0.05					
3.055	H/-0.05	3.060	✓		CWC-20	
.238	H/-0.05	.238	✓		CWC-20	
AC	70/10 70	70	✓		70/10 70	
0.3142/3148	N/A	.3145	✓		pin	
3.833	H/-0.05	3.829	✓		CWC-20	
.453	H/-0.010	.447	✓		CWC-20	

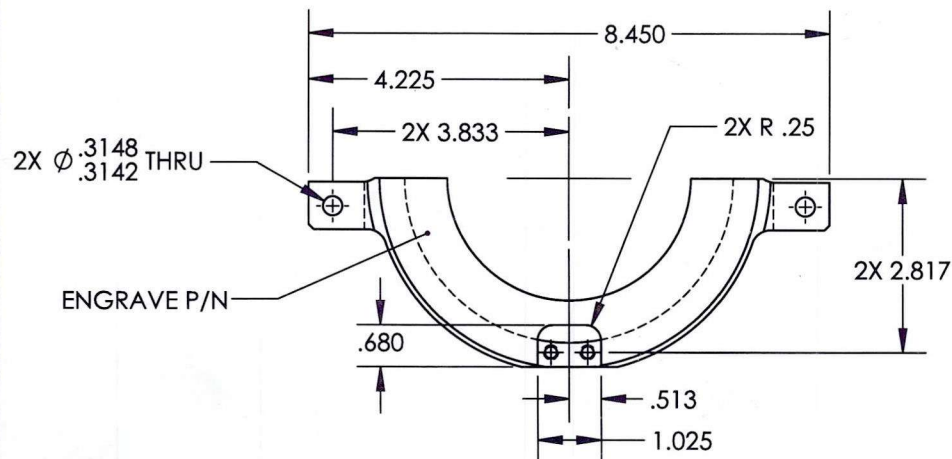
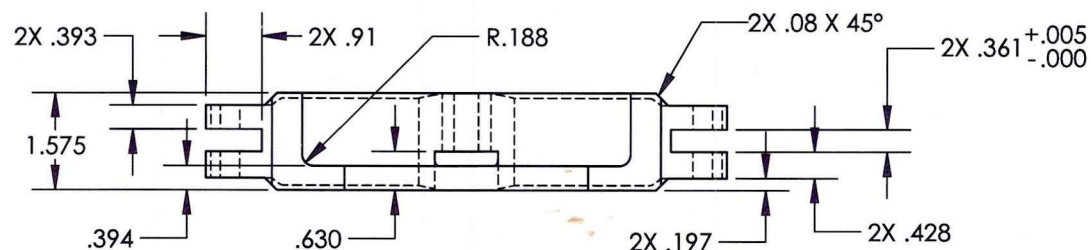
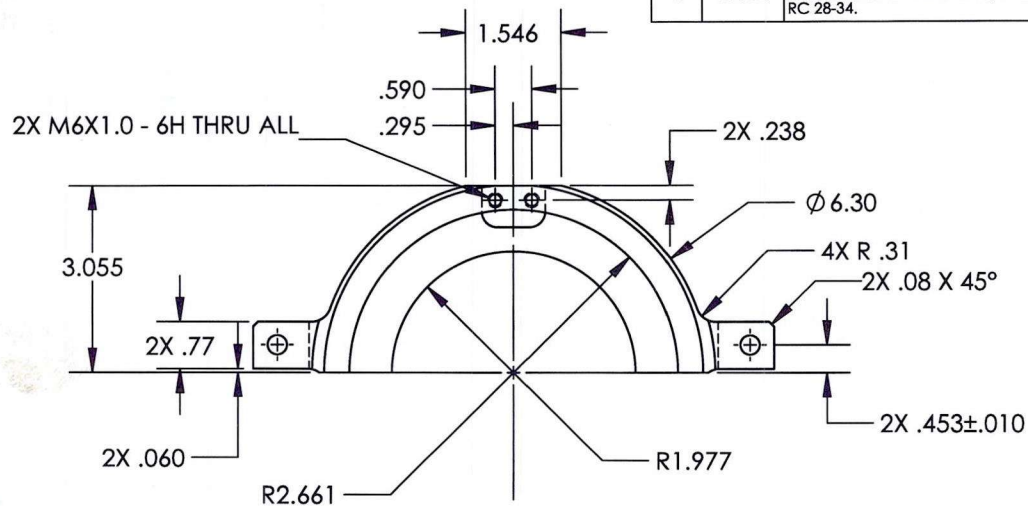
Measured by: PT	Checked by: B.	QC Inspector:
Date: 19-02-22	Date: 19-03-21	Date:

Engineering Approval: (If necessary)	Date:
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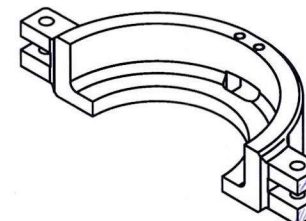
Rev	Date	Change	Revised by	Approved
A	14.07.31	New Issue	KJ	

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
2	16-0220	-5 CH'D DIM WAS 2X .770 IS 2X .77, ADDED DIM 2X .453 ±.010, 2X .91, ADDED ENGRAVE NOTE, CH'D MATERIAL WAS 4140 IS 4140/4142, ADDED FINISH SPEC QMSI-6.2.2, B.O. REV D, ADDED HEAT TREAT RC 28-34.	11/14/2016	RJC	SM



(-5)
RING2



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 189500 MJS
19-01-21

DART AEROSPACE	
TITLE PULLER	
DWG NO. RBE1X53-166-817-5	REV 2
MAT'L 4140/4142 HEAT TREAT RC 28-34 FINISH BLACK OXIDE SPEC QMSI-6.2.2, B.O. REV D	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ± 5° .X ± .1 SURFACES = 125/	
1. BREAK ALL SHARP EDGES .015 X 45° OR .015R	
2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009	
DRAWN BY: GILBERT CHECKED: OPPTS APPR: QA APPR: APPROVED: MACKOVJAK SCALE 1:3	
USED ON MODEL EC135 DATE 6/18/2012 SHEET 4 OF 7	

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled		FAULT CATEGORY ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



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Hammerbury, ON K6A 1K7
CANADA
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Email: sales@dartaero.com
www.dartaerospace.com

Container No: S151048

Part: RBE1X53-166-817-5

Job No: 189500

Serial No/Batch: S151048

Revision: 2

Inspector:

Exp Date:

Instructions:

Date: 02/05/19



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER **PO042978**



Supplier: GRO002-VC
Group Altech
2455 Halpern
St Laurent
QC
H4S 1N9 Canada
Phone: 514-335-3666
Fax: 514-335-3868

Attention: Grenon, Sylvie

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

PO No: PO042978

PO Date: 3/25/19

Due Date: 3/29/19

Purchase Order

Revision:

Revision Date:

Ship-To Contact: Phone:

Via: Ground

Pymt Terms: Net 60

Freight Terms:

Special Comments:

Revision

Items

Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	189489	RBE1X36-166-807-1	Spanner -Issue P/O; -Black oxide finish, MIL-C-13924C Class 1 -Apply thin layer of oil/CPC per MIL- PRF-16173 Grade 3 Class 1 or MIL-c- 81309 Type III Or MILL-C23411A or MIL-PRF-81309 and wipe off excess. -Material type; 4140 -Certificate of Conformity is required	Firmed	-	3/29/19	3 pcs	0 pcs	3 pcs	\$3.428/pcs	\$10.28
Line Item Note ** NEED BACK MARCH 29,2019 * RUSH **											
2	188960	RBBP1425-103-03	Keeper (Outside Processing - Black Oxide) -Issue P/O to Groupe Altech; PO -Black oxide finish, MIL-C-13924C Class 1 -Certificate of Conformity is required	Firmed	-	3/29/19	24 pcs	0 pcs	24 pcs	\$3.428/pcs	\$82.27
Line Item Note ** NEED BACK MARCH 29,2019 * RUSH **											



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PURCHASE ORDER

PO042978



Items											
Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
3	189499	RBE1X53-166-817-3	1-Black oxide finish, MIL-C-13924C Class 1 -Apply thin layer of oil/CPC per MIL-PRF-16173 Grade 3 Class 1 or MIL-c-81309 Type III Or MILL-C23411A or MIL-PRF-81309 and wipe off excess. -Certificate of Conformity is required	Firmed	-	3/29/19	4 pcs	0 pcs	4 pcs	\$3.428/pcs	\$13.71
Line Item Note ** NEED BACK MARCH 29,2019 * RUSH **											
4	189500	RBE1X53-166-817-5	1-Black oxide finish, MIL-C-13924C Class 1 -Apply thin layer of oil/CPC per MIL-PRF-16173 Grade 3 Class 1 or MIL-c-81309 Type III Or MILL-C23411A or MIL-PRF-81309 and wipe off excess. -Certificate of Conformity is required	Firmed	-	3/29/19	4 pcs	0 pcs	4 pcs	\$3.428/pcs	\$13.71
Line Item Note ** NEED BACK MARCH 29,2019 * RUSH **											
Grand Total:										\$119.98	



Dart Aerospace Ltd.
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Hawkesbury, ON
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Canada

Tel (613) 632-5200

PURCHASE ORDER

PO042978



Order Notes

Procurement Quality Clauses

A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)

A022 Apical Processing
A024 process certifications
A026 certification of material conformance

A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 4/1/19 2:07 PM dart.Lussier.Patrick



Certificat de Conformité / Certificate of Compliance



0 1 7 9 7 0 - 1

2455, Rue Halpern | Saint-Laurent | Québec | H4S 1N9

Tel: 514-335-3666

Fax: 514-335-3868

www.groupaltech.com

Bon de Livraison / Packing Slip

017970- 1

Livré à / Ship to

DART AEROSPACE LTD

1270 ABERDEEN STREET

HAWKESBURY, ON, K6A1K7

CANADA

Tel.: 613-632-5200 Fax.:

Client / Customer:

DART AEROSPACE LTD

1270 ABERDEEN STREET

HAWKESBURY, ON, K6A1K7

CANADA

BUYER:

Date expédition Ship date		Créé Par Generated By	Transport / No de Compte Courier / Acc. No.	Bon de commande Client Customer Purchase Order No.				
01-Apr-2019		Shankar Anand		PO042978				
#Ligne Line#	No. de Série / # Pièce Part Number / Line Item Details	Description pièce(s)	CATG. U/M	Comm. /Ordered	Exp/ Shipped	Qté NC/ NC Qty	Qté Scrap/	À venir/ Back Order
1	RBE1X36-166-807-1 Rev.	RBE1X36-166-807-1 01 -OXIDE-BLK & OIL [OXIDE BLACK AND OIL] MIL-C-13924C CLASS 1 APPLY A THIN LAYER OF OIL WIPE OFF EXCESS OIL	OXIDE-BLACK CH	3	3	0	0	0
2	RBBP1425-103-03 Rev.	RBBP1425-103-03 01 -OXIDE BLACK [OXIDE BLACK] MIL-C-13924C CLASS1	OXIDE-BLACK CH	24	24	0	0	0
3	RBE1X53-166-817-3 Rev.	RBE1X53-166-817-3 01 -OXIDE-BLK & OIL [OXIDE BLACK AND OIL] MIL-C-13924C CLASS 1 APPLY A THIN LAYER OF OIL WIPE OFF EXCESS OIL	OXIDE-BLACK CH	4	4	0	0	0
4	RBE1X53-166-817-5 Rev.	RBE1X53-166-817-5 01 -OXIDE-BLK & OIL [OXIDE BLACK AND OIL] MIL-C-13924C CLASS 1 APPLY A THIN LAYER OF OIL WIPE OFF EXCESS OIL	OXIDE-BLACK CH	4	4	0	0	0

DAS
68
9-89

Notes Additionnelles / Additional Notes

Epaisseur réelle
Actual Thickness

Inspecteur Qualité
Quality Inspector

Réçu par
Received By

Notre responsabilité financière et légale ne sera pas supérieure au montant de la facture issue.

We hereby certify that the parts listed above have been process in accordance with your purchase order and specifications and are in conformance with your requirements.